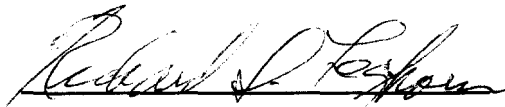


By doing so, the Commission will enable parents through both information and technology to shield their children from programs they consider harmful, thus implementing Section 551 of the 1996 Act and doing so in a manner which also advances Federal policies related to competition and anti-trust, diversity of information, public safety and health, and the First Amendment.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "Richard S. Leghorn", written over a horizontal line.

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November 24, 1997

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Appendix A

Technology and the V-Chip

The following is a proposal to expand the recently released EIA-744 standard to accommodate independent ratings systems.

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Proposal for Expansion of EIA-744 to Include Independent Rating Systems

This is a proposal for an expansion of EIA-744 "Transport of Content Advisory Using Extended Data Service (XDS)" to allow for independent rating suppliers.

This model is designed with a number of goals in mind.

- Utilize an existing transmission protocol, specifically EIA 608 . This specification has data formats sufficient for holding the ratings data of multiple raters, and provides a well designed and tested method of inserting data into a video stream.
- Allow for the continued use of existing ratings and advisory services, including those based on MPAA movies ratings.
- Allow for the current proposals for rating services such as the revised industry proposal, which adds V,S,L&D information, the OKTV system and the proposed Canadian system.
- To answer the requests of segments of society for a system based on content and not only on age related factors, one that is more responsive to parental needs, and one that can be customized by parents to better meet the needs of their specific households.

This proposal is divided into two parts, the first describing the data structure and how it fits into the EIA 608 standard, and the second describing the operational capabilities of the system.

Part 1, V-CHIP Data Definition and Protocol

EIA-744 describes a two character system which contains information from MPAA, TV parental guidelines as defined by the industry, and also makes room for a "non-U.S. NTSC System. Under EIA 608 up to 32 characters are allowed in a packet leaving room for up to seven independent raters under this proposed addition to EIA-744 utilizing the following data formats. The following describes the definitions of the characters *following* the EIA-744 section of the packet.

Definitions

Ratings supplier ID: The size of this data segment will depend on the number of ratings suppliers which can reasonably be anticipated. Assume 3 bits allowing for up to 8 suppliers. Id0, id1, id2

Rating data: Assume 6 levels plus NR and N/A¹. Size 3 bits r0, r1, r2

Content Data: These data could be used to expand on the rating data of each supplier, to indicate the reasons for the rating by including content information. Assume six categories with up to eight levels each including NR and N/A.

Using EIA-608 transmission protocol for line 21 field 2 as a standard the following data transmission groupings evolve. Note that because the ratings data is not ASCII, then bit 6 must be set to a 1. This results in an effective byte size of six bits. In increasing levels of detail, the following tables represent proposed data to be transmitted for each rater.

Data packet²

Rater ID 3 bits	Rating 3 bits	Content Data 18 bits
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Data Packet Expanded in Transmission Protocol Format

Character	b6	b5	b4	b3	b2	b1	b0
id and rating	1	ID2	ID1	ID0	R2	R1	R0
Content data byte 1	1	V2	V1	V0	S2	S1	S0
Explanatory data byte 2	1	L2	L1	L0	H2	H1	H0
Explanatory data byte 3	1	I2	I1	I0	N2	N1	N0

The following tables give specific definitions of each data group with some possible examples.

¹NR - Not Rated
N/A - Not Applicable

²Note that at a data rate of two characters per frame, which is what is defined in 608, these data would require only 2 frames of video to transmit for each additional rating system.

Rater ID

ID2	ID1	ID0	group
0	0	0	OKTV
0	0	1	tbd
0	1	0	tbd
0	1	1	tbd
1	0	0	tbd
1	0	1	tbd
1	1	0	tbd

Violence

V2	V1	V0	rating
0	0	0	N/A
0	0	1	none
0	1	0	
0	1	1	
1	0	0	
1	0	1	
1	1	0	extreme
1	1	1	NR

Sexual content

S2	S1	S0	rating
0	0	0	N/A
0	0	1	none
0	1	0	
0	1	1	
1	0	0	
1	0	1	
1	1	0	extreme
1	1	1	NR

Language

L2	L1	L0	rating
0	0	0	N/A
0	0	1	none
0	1	0	
0	1	1	
1	0	0	
1	0	1	
1	1	0	extreme
1	1	1	NR

Horror

h2	h1	h0	rating
0	0	0	N/A
0	0	1	none
0	1	0	
0	1	1	
1	0	0	
1	0	1	
1	1	0	extreme
1	1	1	NR

Illegal or Dangerous Acts

i2	i1	i0	rating
0	0	0	N/A
0	0	1	none
0	1	0	
0	1	1	
1	0	0	
1	0	1	
1	1	0	extreme
1	1	1	NR

Nudity

n2	n1	n0	rating
0	0	0	N/A
0	0	1	none
0	1	0	
0	1	1	
1	0	0	
1	0	1	
1	1	0	extreme
1	1	1	NR

Part 2, Functional Description of Independent rating data

The creation of a useful system requires more than just a chip and a transmission protocol. To meet the societal demands for a communications system for multiple raters, various aspects of the system must be defined and standardized prior to implementation. This allows for uniform operation of the system (interoperability), and the prevention of obsolescence of parts of the system like television sets and data handling equipment. At least a minimum functional definition for data content and consumer interface must be agreed upon. In this way every consumer device with blocking technology will know what to expect and how to act when the V-Chip system is activated. Here I will describe a set of requirements for both raters and television sets to allow for such a system.

Two types of data are required. The first is a single level representing the recommended viewing groups based on age, degree of risk of harm, intensity or other hierarchical measure. Space for six levels plus NR and N/A are provided. This will allow the receiving device to react to a single byte and block the program based on a comparison of the parent's chosen level and that of the program.

In addition, there is room for up to six content categories each with its own six levels. These content data can then be used in one of two ways. First a parent can call up a visual display of the data to learn the basis of the rating (Fig.1). The form of the display can be determined by the TV set manufacturer. Also a parent can choose to ignore the single rating byte and will be able to set their own levels in each category (Figs. 2 and 3). The receiving device will then compare the parents levels to that of the program and block the program if the level is exceeded in any category. This last function could be optional.

Figure 1 is a graphic example of the content data³.

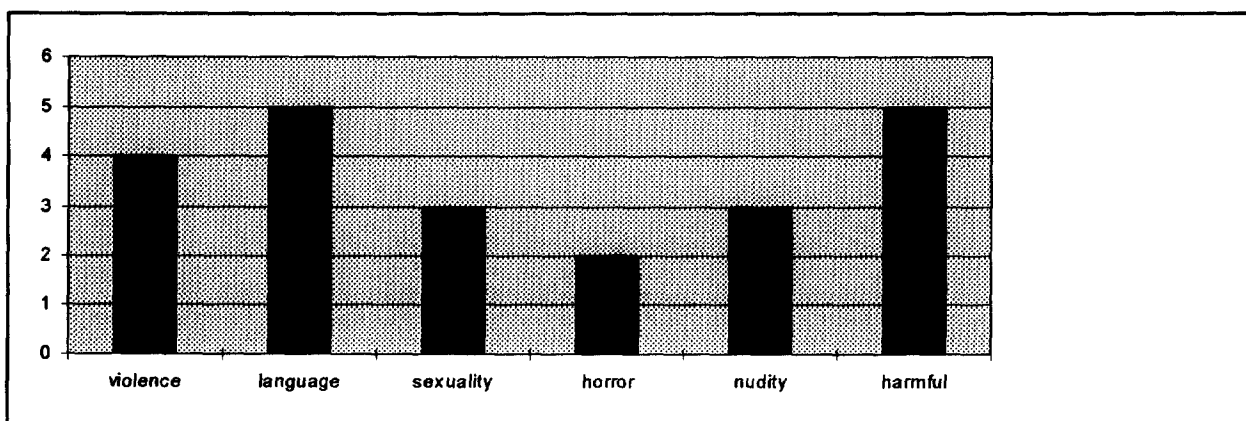


Figure 1

³ A simple numeric display would be simpler and less expensive.

In Figure 2 a parents' preset profile of acceptable level for each category is compared to program content as determined by the rater. In this case, the program would be seen since none of the program content as determined by the rater exceeds the parents' preset limits.

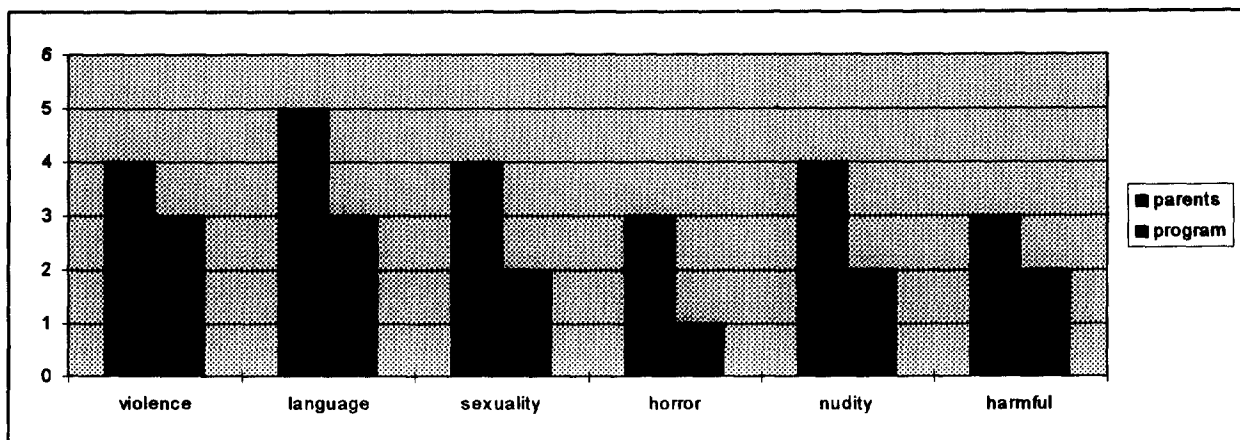


Figure 2

Figure 3 shows a program that would be blocked because the parents' limits are exceeded in two cases, language and horror.

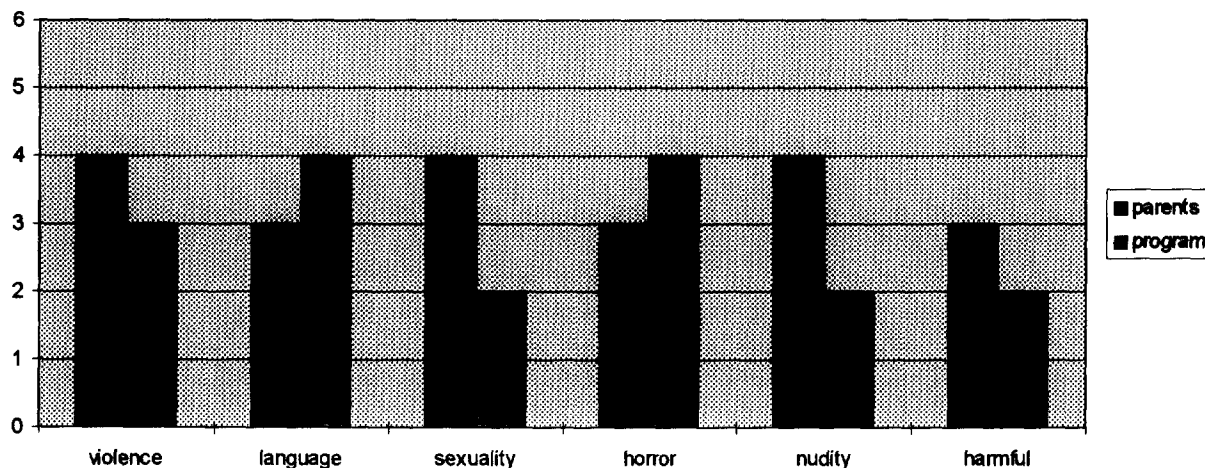


Figure 3

This proposal designed and prepared by:
 Bill Perlman
 President,
 Ashfield Consulting Group, Inc.
 November 15, 1997